

2010-09-27 Monday Morning Notes

Monday, September 27, 2010
7:47 AM

Stacking

- No noticeable occurrences of the "stacktail phantom" over the weekend since Cryo made adjustments to the frig. It is believed that the dewar level was low enough so that when it hit the lower end of its normal oscillation, that we were exposing the cryo notch just enough to make it go out of tune.
- Sunday evening ARF1-1 had a high voltage power supply issue. Wes came in to fix it.
 - Filament power supply running +5A above upper limit.
- Sunday evening 22:56 had an occurrence of large emittance growth. Ops were unable to turn on the core cooling. Ops went through a set of transfers.
- Stacking Numbers
 - $\langle \text{stacking rate} \rangle = 24.8 \text{ mA/hr}$
 - $\langle \text{production} \rangle = 19.2 \text{ e-6/pbar}$

Transfers

- Unstacked 1126e10 (daily average 409e10) over 133 transfers (44 daily average) over 45 sets (15 daily average) with an overall efficiency of 95.0%
- There are down a percent or so.
- There were a couple of transfers with higher emittances and a few unexplained efficiencies
- May need to adjust the fudge factors a bit. Horizontal closer in MI has drifted about 1mm.

Requests

- None

The Numbers

- AI's Numbers
 - Stacking
 - Pbars stacked: 1237.59 E10
 - Time stacking: 55.40 Hr
 - Average stacking rate: 22.34 E10/Hr
 - Uptime
 - Number of pulses while in stacking mode: 84223
 - Number of pulses with beam: 77046
 - Fraction of up pulses was: 91.48%
 - The uptime's effect on the stacking numbers
 - Corrected time stacking: 50.68 Hr
 - Possible average stacking rate: 24.42 E10/Hr
 - Could have stacked: 1352.87 E10/Hr
 - Recycler Transfers
 - Pbars sent to the Recycler: 1215.60 E10
 - Number of transfers : 132
 - Number of transfer sets: 48
 - Average Number of transfer per set: 2.75
 - Time taken to shoot including reverse proton tuneup: 00.46 Hr
 - Transfer efficiency: 95.16%
 - Other Info
 - Average POT : 8.32 E12

- Average production: 19.30 pbars/E6 protons

Logbook entries:

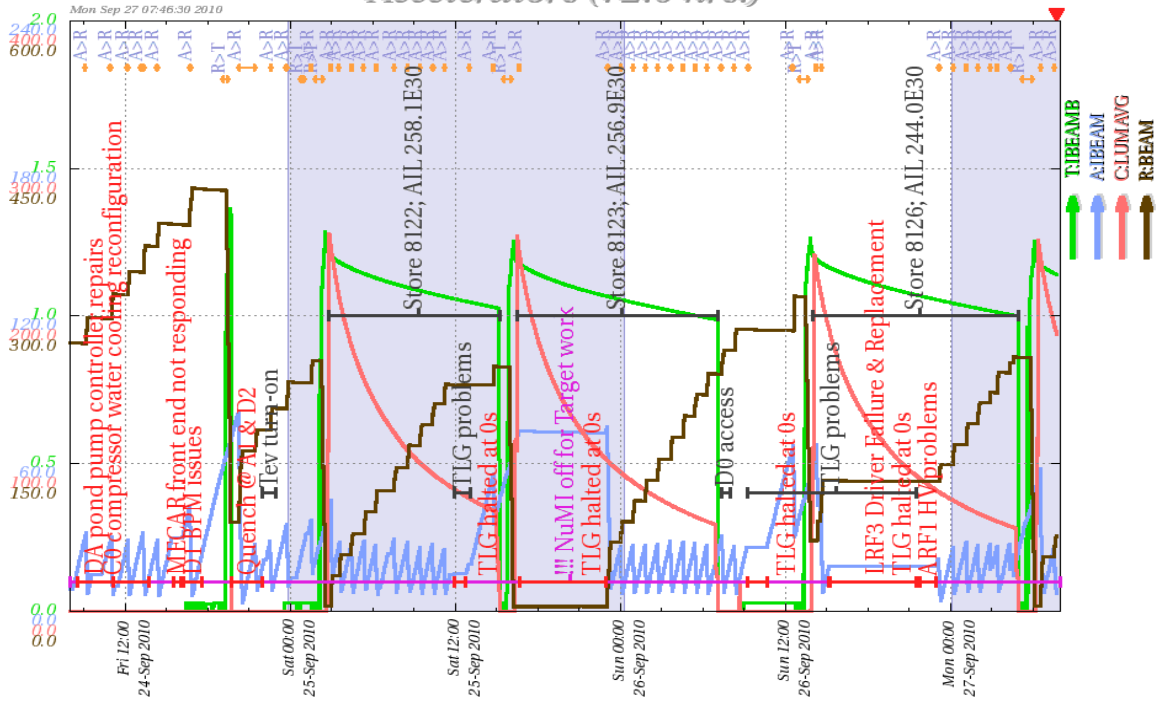
Worklist:

Grand Total 15				
Pbar				
ID	Requestor	Title	Location	Type
12416	White, Dale	change detector change detector	AP-10 & 30	ES&H / Interlocks
12413	Sheahan, Patrick	Thermocouple chassis replacement DRF1-2 Thermocouple chassis replacement	DRF1-2	Controls
12406	Drendel, Brian	ARF1 calibration After changing out the Acopian +5V power supply in the ARF1 LLRF, the output of the ARF1 amplitude curve is saturated. One hour of no stacking time is needed to recalibrate the output.	AP50	Low Level RF
12405	Drendel, Brian	D:QS703 shunt Check out D:QS703 shunt. This shunt has a setting of zero amps, but has an output of -2.2A. It's output has been noisy since the end of last week and tracks similar behavior in D:Q702. See the Pbar Elog at http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=249&anchor=071244&hilite=07:12:44 for details.	Transport Enclosure	Power Supply
12401	Drendel, Brian	Replace A:10ECOXY Since the evening of September 19, 2010 the readback from A:10ECOXY (Pbar Rings Tunnel A10 East ceiling O2 monitor) has become noisy and has dropped to near zero twice. The other O2 monitors do not show this behavior and I see no evidence of changing Debuncher cryo activity in the region. The O2 head probably needs changing out on our next access. More information can be found in the Pbar Elog at http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=248&anchor=153900&hilite=15:39:00	Pbar Rings (A10 East)	ES&H / Interlocks
12385	Drendel, Brian	Fix A:QDFPSI readback The A:QDF power supply at AP50 has a Keithly DVM that talks back over GPIB via AP5001 to give a high resolution readback for the supply. The DVM locally reads the expected value of 2.496 (249.6 A), but the ACNET parameter shows -30A. See http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=228&anchor=081204&hilite=08:12:04 for details. We need pbar power supply and controls GPIB experts work together to figure out the problem. We should try to line this work up with other downtime.	AP50 Service Building	Power Supply

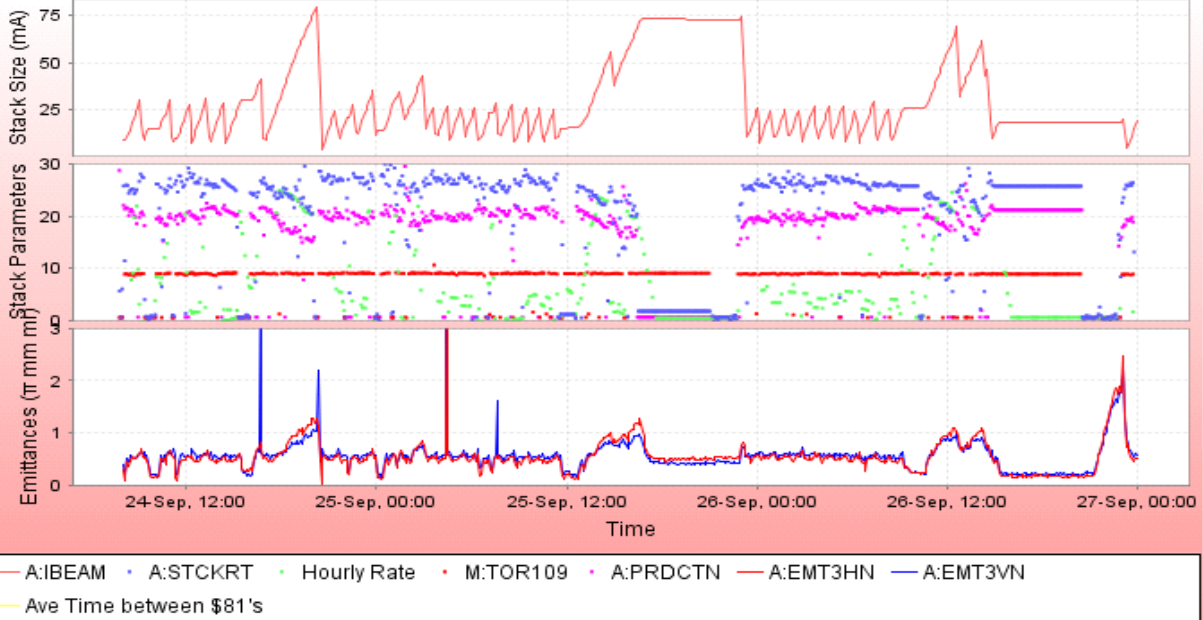
12378	Drendel, Brian	D:EKIK Module #1 Power Supplies D:EKIK module #1 is starting to show some timing drift. During a shutdown of a day or longer, it would be nice to open up the oil-filled thyratron tank and check the brick power supplies.	AP10 Service Building	Power Supply
12376	Leveling, Anthony	Sept target air blower check Perform periodic maintenance on target blower in September 2010. Last maintenance was during the 2010 summer shutdown.	AP0 Target Hall	Target Station
12363	Gollwitzer, Keith	Inspection of Pbar Rings Inspection of Pbar tunnel; search for water leaks and ground water etc.	Rings enclosure	Misc
12345	Vander Meulen, David	D:V4TW01 Tripps D:V4TW01 is tripping on reverse power.	D30 Tunnel	Stochastic Cooling
12337	Leveling, Anthony	Store 10 mm-7 in coffin 10 mm-7 lens/transformer was removed from service on 8/21 following development of a transformer ground fault. Remove 10 mm-7 from Lens Module #2 and store in storage coffin. Photograph 10 mm-7 Be windows and examine transformer for evidence of the ground fault. Install a spare lens transformer on Lens Module #2. The work can be split up over several shorter access opportunities.	AP0 upper vault	Target Station
12294	Vander Meulen, David	Trombone problems D:H1TH01 & D:H1TH03 don't move. Not sure if upstairs or in tunnel.	AP30 / D20 tunnel?	Stochastic Cooling
12253	Leveling, Anthony	Install new shielding blocks New concrete shielding blocks are to be installed for the JASMIN experiment. Install shield blocks at some opportunistic access when the shield blocks become available. Estimated arrival is now late August/early September.	AP0 upper vault	Target Station
12240	Sievert, Ken	Connect BV500H to A50 CIA Crate Terminate cable and connector on valve, modify crate to accept valve status.	A50	Vacuum
9310	Obrycki, Mark	Sled drawings/ panel schedules Inspect breaker panels in tunnel	AP-10 tunnel	ES&H / Interlocks
Total Requests: 15				
Grand Total 15				

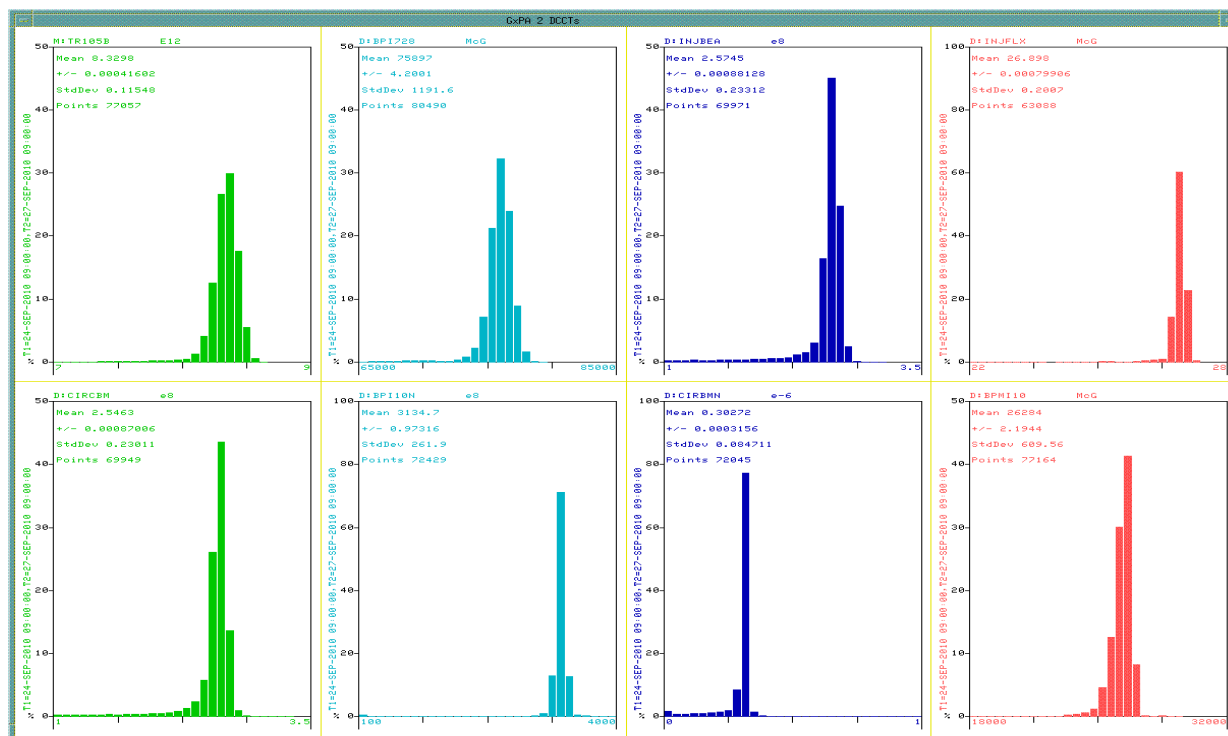
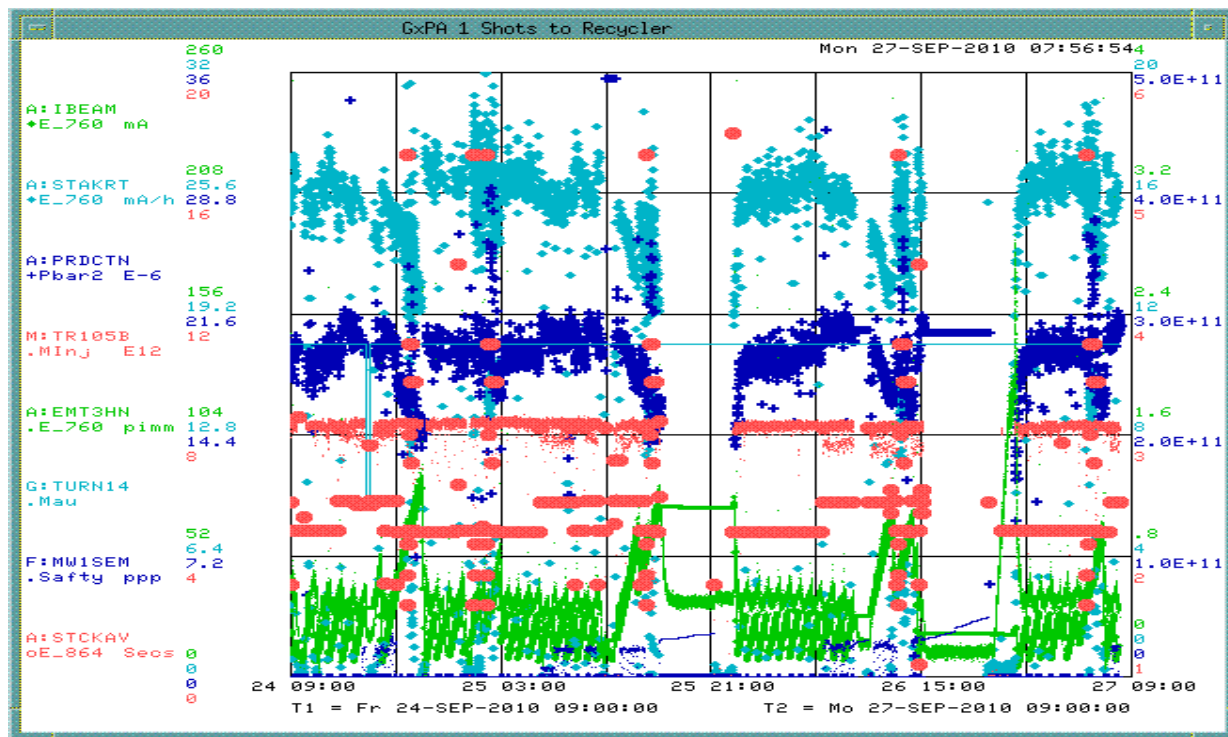
The Plots

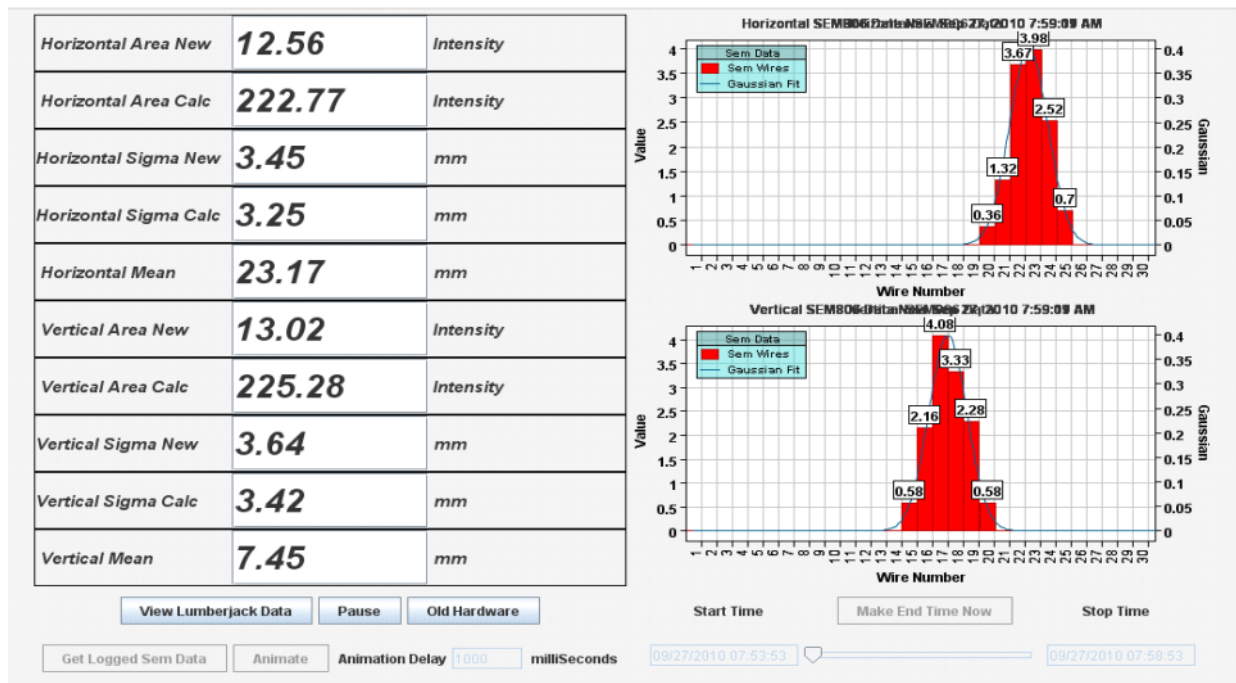
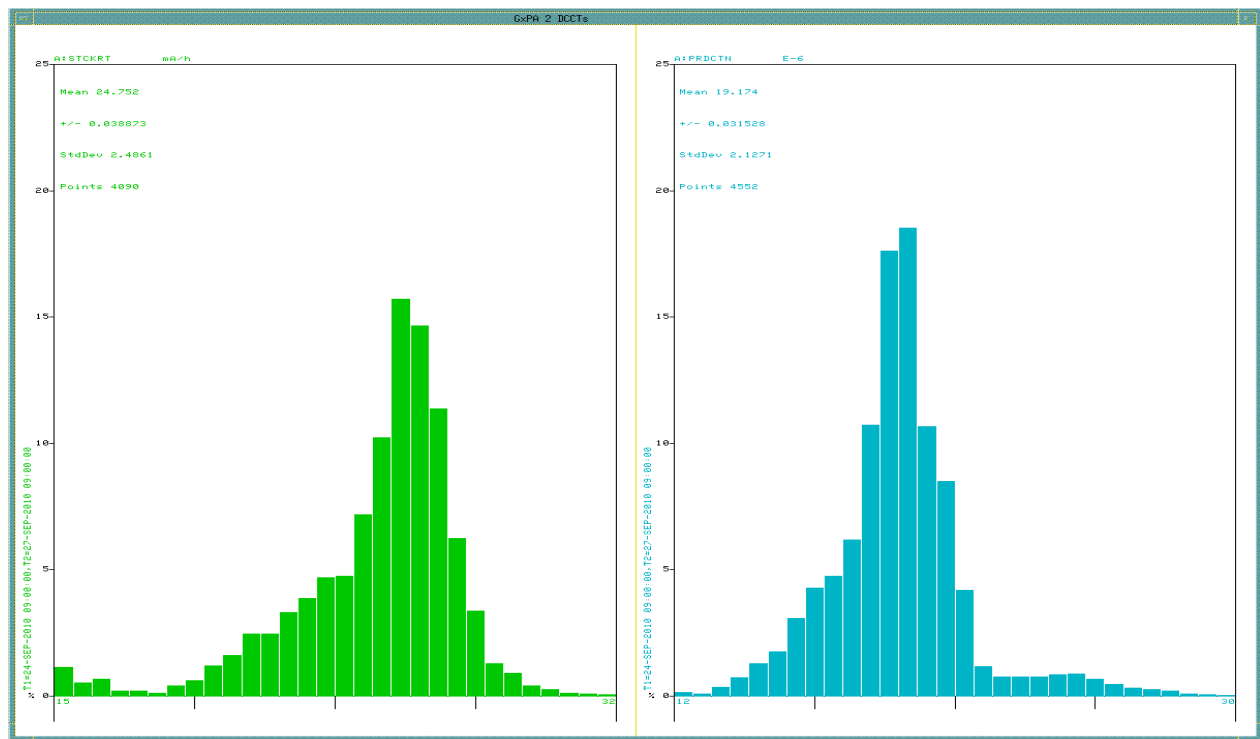
Accelerators (72.0 hrs.)



Fri Sep 24 08:00:00 CDT 2010 -- Mon Sep 27 08:00:00 CDT 2010







Column 1 Number _0_Pbar Transfer Shot #	Column 4 Number_3 Transfer Time	Column 21 Number _20_A-I BEAMB sampled on \$91 (A-BEA M7), E10	Column 22 Number _21_A-I BEAMB sampled on \$94 (A-BEA M9), E10	Unstacked (mA)	Column 23 Number _22_R- BEAMS (R-BEA ME0[0]) pre fer, E10	Column 24 Number _23_R- BEAM (R-BEA ME0[1]) post fer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Trans fers	Sets	Column 5 Number _4_Ace Horizontal Emittance	Column 6 Number _5_Ace Vertical Emittance	Column 8 Number _7_Ace Longitudi nal Emittan ce	
	Totals =>			1226.25			1164.88	94.99%	96.66%	96.72%	93.49%	133	45	5.6809	5.5729	1.9385	
	Daily Average =>			408.75			388.29					44	15				
20902	Monday, September 27, 2010	7:34	26.79	7.02	22.35	55.42	76.74	21.41	95.82%	99.06%	98.62%	97.69%	3	1	5.131	5.256	1.987
20901	Monday, September 27, 2010	6:33	57.96	7.64	53.19	5.74	55.59	50.18	94.33%	96.35%	95.85%	92.36%	4	1	6.676	6.281	1.789
20900	Monday, September 27, 2010	4:18	27.86	13.90	19.98	242.48	258.61	16.87	94.43%	96.38%	96.16%	92.67%	2	1	5.376	5.187	1.994
20899	Monday, September 27, 2010	3:24	26.54	7.64	21.58	222.22	242.83	20.74	96.10%	95.42%	96.25%	91.84%	3	1	5.189	5.293	2.013
20898	Monday, September 27, 2010	2:53	27.45	16.71	10.74	212.19	222.47	10.28	95.71%	98.66%	97.68%	96.37%	1	1	5.121	5.222	1.962
20897	Monday, September 27, 2010	2:01	27.41	7.35	22.71	190.95	212.47	21.66	95.39%	96.74%	97.53%	94.35%	3	1	5.073	5.185	1.978
20896	Monday, September 27, 2010	1:09	28.19	7.85	22.98	169.37	191.18	21.94	95.51%	96.91%	96.00%	93.04%	3	1	5.259	5.415	1.999
20895	Monday, September 27, 2010	0:11	25.85	6.90	21.49	149.11	169.59	20.62	95.95%	97.78%	98.20%	96.02%	3	1	5.073	5.207	1.986
20894	Sunday, September 26, 2010	23:11	21.52	3.95	19.68	131.79	149.39	17.80	90.42%	93.16%	92.50%	86.17%	3	1	8.681	8.609	1.928
20893	Sunday, September 26, 2010	14:34	47.87	7.61	43.99	91.77	132.98	41.44	94.21%	96.22%	95.94%	92.32%	4	1	6.312	5.595	1.893
20892	Sunday, September 26, 2010	14:18	64.70	42.86	21.84	71.97	91.96	19.99	91.50%	94.90%	95.00%	90.15%	1	1	9.98	8.737	1.637
20891	Sunday, September 26, 2010	12:37	67.64	30.23	38.50	285.15	320.54	35.62	92.52%	94.94%	94.48%	89.70%	2	1	8.844	7.659	1.714
20889	Sunday, September 26, 2010	8:18	26.85	7.00	22.50	265.31	286.84	21.68	96.36%	97.86%	97.59%	95.50%	3	1	4.752	5.135	1.956
20888	Sunday, September 26, 2010	7:24	31.06	7.67	25.94	241.11	265.72	24.77	95.49%	97.58%	97.26%	94.90%	3	1	5.119	5.134	1.961
20887	Sunday, September 26, 2010	6:18	27.22	7.40	22.47	220.11	241.52	21.60	96.14%	97.81%	97.60%	95.46%	3	1	5.063	5.405	1.97
20886	Sunday, September 26, 2010	5:26	27.78	7.51	23.01	198.52	220.34	21.96	95.45%	96.61%	96.59%	93.32%	3	1	4.906	5.154	1.98
20885	Sunday, September 26, 2010	4:34	28.32	7.74	23.22	176.61	198.78	22.33	96.16%	98.01%	98.14%	96.20%	3	1	5.204	5.185	1.951
20884	Sunday, September 26, 2010	3:39	28.73	7.90	23.37	154.54	176.82	22.43	95.98%	96.87%	97.03%	94.00%	3	1	5.349	5.352	1.993
20883	Sunday, September 26, 2010	2:42	27.37	7.47	22.48	133.28	154.72	21.59	96.02%	96.55%	96.09%	92.77%	3	1	5.123	5.276	2.005
20882	Sunday, September 26, 2010	1:48	26.88	7.27	22.12	112.29	133.44	21.22	95.94%	98.30%	99.40%	97.71%	3	1	5.287	5.141	1.997
20881	Sunday, September 26, 2010	0:55	26.96	7.22	22.35	91.10	112.42	21.41	95.81%	97.70%	98.37%	96.11%	3	1	4.908	5.408	2.023
20880	Sunday, September 26, 2010	0:02	26.55	7.07	22.03	70.19	91.21	21.11	95.85%	98.05%	98.02%	96.11%	3	1	5.097	5.241	2.016
20879	Saturday, September 25, 2010	23:04	75.26	9.13	70.24	4.79	70.31	65.95	93.90%	95.70%	95.73%	91.61%	5	1	6.764	6.314	1.82
20877	Saturday, September 25, 2010	14:48	56.27	35.36	20.91	229.72	249.14	19.42	92.91%	95.27%	95.21%	90.71%	1	1	9.809	7.444	1.713
20875	Saturday, September 25, 2010	11:11	25.32	6.78	20.96	210.87	230.76	20.03	95.54%	96.24%	95.99%	92.38%	3	1	4.727	5.145	2.007
20874	Saturday, September 25, 2010	10:21	27.30	7.18	22.74	189.27	211.12	22.00	96.72%	97.52%	98.81%	96.37%	3	1	4.715	5.007	1.997
20873	Saturday, September 25, 2010	9:27	26.22	7.16	21.75	168.64	189.52	20.96	96.37%	96.41%	97.74%	94.23%	3	1	4.966	4.879	1.972
20872	Saturday, September 25, 2010	8:33	28.62	7.44	23.75	146.14	168.84	22.85	96.19%	97.55%	97.01%	94.63%	3	1	5.189	5.041	1.985
20871	Saturday, September 25, 2010	7:35	29.75	7.48	24.76	122.55	146.36	23.87	96.39%	96.81%	96.28%	93.21%	3	1	4.859	5.167	1.956
20870	Saturday, September 25, 2010	6:13	27.25	6.41	22.84	100.96	122.81	21.93	96.01%	97.20%	97.83%	95.09%	3	1	4.688	4.782	1.972
20869	Saturday, September 25, 2010	5:23	29.02	8.27	23.41	78.83	101.08	22.40	95.70%	96.81%	97.14%	94.04%	3	1	5.026	5.375	2.014
20868	Saturday, September 25, 2010	4:26	27.12	7.51	22.28	57.72	78.96	21.36	95.91%	96.26%	95.82%	92.23%	3	1	5.183	5.231	2.002
20867	Saturday, September 25, 2010	3:35	28.03	7.74	22.95	36.07	57.82	21.82	95.08%	97.29%	97.48%	94.84%	3	1	5.041	5.321	1.994
20866	Saturday, September 25, 2010	2:57	45.11	14.36	33.10	5.33	36.17	30.96	93.54%	96.08%	96.29%	92.51%	3	1	6.744	6.136	1.958
20865	Saturday, September 25, 2010	1:32	37.45	15.30	23.43	232.41	254.62	22.35	95.37%	97.16%	96.85%	94.11%	2	1	6.14	5.549	1.914
20864	Friday, September 24, 2010	23:45	35.53	9.81	28.37	206.11	233.00	27.10	95.52%	96.96%	97.51%	94.55%	3	1	5.512	5.482	1.967
20863	Friday, September 24, 2010	22:33	28.78	8.50	23.56	184.06	206.44	22.55	95.68%	97.42%	97.92%	95.39%	3	1	5.234	5.369	1.985
20862	Friday, September 24, 2010	21:28	27.65	7.84	22.43	162.92	184.34	21.55	96.10%	96.70%	97.16%	93.95%	3	1	5.232	5.258	1.978
20861	Friday, September 24, 2010	20:17	81.48	3.33	78.24	90.50	163.35	73.55	94.00%	95.30%	95.10%	90.63%	5	1	6.434	5.73	1.694
20860	Friday, September 24, 2010	16:42	42.32	5.78	40.08	392.43	430.40	38.54	96.15%	96.87%	96.93%	93.90%	4	1	5.751	5.26	1.918
20859	Friday, September 24, 2010	14:21	28.95	6.57	25.00	370.86	394.70	24.04	96.19%	96.86%	97.60%	94.54%	3	1	4.899	4.887	1.958
20858	Friday, September 24, 2010	13:20	32.63	6.60	28.36	344.70	371.78	27.33	96.37%	98.55%	99.02%	97.59%	3	1	5.16	5.093	1.895
20857	Friday, September 24, 2010	12:13	28.84	6.64	24.78	321.83	345.53	23.91	96.52%	96.73%	97.00%	93.83%	3	1	5.104	5.095	1.947
20856	Friday, September 24, 2010	11:00	30.43	6.61	26.28	297.62	322.60	25.21	95.95%	96.32%	95.43%	91.91%	3	1	5.466	5.499	1.931
20855	Friday, September 24, 2010	9:10	32.16	7.07	27.56	272.23	298.57	26.56	96.38%	96.85%	98.34%	95.24%	3	1	5.476	5.631	1.925

